

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

TITLE V (DRAFT PERMIT) No. V-03-018 R2

KINGSFORD MANUFACTURING COMPANY

BURNSIDE, KY

JUNE 14, 2004

RALPH E. GOSNEY, REVIEWER

PLANT I.D. # 21-199-00018

APPLICATION LOG # 56021

EPA comments were received on the proposed revised permit V-03-018 R1 on May 26, 2004. A sentence was added to the compliance demonstration method for emission units EU-07 and EU-38, in the permit, to clarify that testing would not be used to establish less stringent BACT limits. The final revised permit was issued as V-03-018 R2, revised on June 14, 2004.

SOURCE DESCRIPTION:

An application for a major revision to the Title V/PSD Permit, V-03-018, for the Kingsford Manufacturing Company (Kingsford) was received on September 25, 2003. The application includes the following:

- ? Modifications to emission unit EU-01, Wood Receipt and Storage;
- ? Replacement and increased capacity of emission units EU-02, Wood Dryer and Retort Furnace with After Combustion Chamber and EU-07, Briquet Dryer A; and
- ? The installation of a new emission unit EU-38, Briquet Cooler A.

There will also be increased potential emissions from emission units EU-05 Briquet Manufacturing Dust Collector and EU-11 Plant Roads – Paved and Unpaved, but no major modification, as defined by 401 KAR 51:017 Prevention of significant deterioration of air quality.

Kingsford performed modeling and demonstrated compliance with the national ambient air quality standards (NAAQS). The NAAQS analysis evaluated the 3-hr, 24-hr and annual sulfur dioxide (SO₂), 24-hour particulate matter less than 10 micrometers (PM₁₀), and the annual nitrogen oxides (NO_x) emissions from the facility as well as emission from other local NAAQS sources.

Increment consumption was predicted by Kingsford to be as follows:

POLLUTANT	PM ₁₀		SULFUR DIOXIDE			NITROGEN DIOXIDE
	Annual Arithmetic Mean	24-Hour Maximum	Annual Arithmetic Mean	24-Hour Maximum	3-Hour Maximum	Annual Arithmetic Mean
Allowable Increment (? g/m ³)	15	30	20	91	512	25
Predicted consumption (? g/m ³)	0.24	9.01	1.76	11.97	45.56	4.30

The potential for the proposed project to have an adverse effect on air quality related values were evaluated by Kingsford, which included: Class I area impacts, effects on vegetation, acidification of soil and rainfall, and effects on sensitive biological communities. The ambient air concentration levels that trigger acute and chronic effects are higher than the levels that can be expected from the Kingsford facility. Emissions from the Kingsford facility are not expected to have an adverse impact on any of the surrounding biological communities.

Kingsford performed the Class I air quality increment and air quality related values impact analyses using the Environmental Protection Agency's CALPUFF/CALMET modeling system. All of the modeled impacts were below the EPA Class I significant impact levels. The National Park Service reviewed the application and stated that they did not anticipate the emissions from the modified facility will have any significant impacts on air quality related values at Mammoth Cave National Park (October 29, 2003 letter from the National Park Service to the Kentucky Division for Air Quality). United States Department of Agriculture, Forest Service, has also stated that Kingsford followed the guidelines set forth in the Federal Land Managers' Air Quality Related Values Workgroup (FLAG) document and the maximum annual concentrations of pollutants were below the significant impact level (March 29, 2004 letter from the Forest Service to the Kentucky Division for Air Quality).

Kingsford manufactures charcoal briquets with various additives. An air quality permit to construct and operate a Solvent Treated Briquet (STB) production line was issued on June 9, 1998, subject to Prevention of Significant Deterioration (PSD) regulations. An amendment to the Title V Permit Application was received on May 3, 1999 for the addition of a new lighter fluid bottling line. A final Title V/PSD Operating Permit, V-03-018, was issued on November 4, 2003 and will expire on November 4, 2008.

The facility is classified as a Title V major source of air pollution based on the potential to emit more than 100 tons per year (tpy) of particulate matter less than 10 micrometers (PM₁₀), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and volatile organic compounds (VOC). New Source Performance Standards (NSPS) apply to the 300-hp waste heat boiler installed in 1991. The source is currently a PSD major source for the potential emission of VOC greater than 100 tpy.

The following is a list of significant emission units.

- E. Unit 01 Wood receipt and storage
- E. Unit 02 Wet Wood Dryer and Dry Wood Charring Furnace (Retort Furnace) – both controlled by After Combustion Chamber (ACC) with ACC stack
- E. Unit 03 Briquet Cooler B
- E. Unit 04 Briquet Cooler C
- E. Unit 05 Briquet Manufacturing Dust Collection (pre-packaging)
- E. Unit 06 Briquet Packaging and Bagging Dust Collection
- E. Unit 07 Briquet Dryer A

- E. Unit 08 Briquet Dryer B
- E. Unit 09 Briquet Dryer C
- E. Unit 10 #2 oil fired indirect heat exchanger rated at 12.6 mmBtu/hr (Waste Heat Boiler)
- E. Unit 11 Plant roads
- E. Unit 37 Solvent Treated Briquet (STB) production line
- E. Unit 38 Briquet Cooler A

Permit V-03-018 R1 Sect. D Facility STB fines fugitive emissions

COMMENTS:

E. Unit 01: Wood receipt and storage

A new dust suppression system is proposed to control fugitive dust emissions during unloading. The proposed operating rate will be increased from 280,320 tons of dry wood/year to 337,260 tons of dry wood/year. The wood is wet prior to entering the dryer. For emission reporting and fee assessment, an emission factor of 0.10 lb PM/ton dry wood and 0.0473 lb PM₁₀/ton dry wood was used by Kingsford based on engineering judgement. Based on AP-42 emission factors for similar wood handling operations and another wood handling facility in Kentucky, the emission factor used by Kingsford is a conservative number. Monitoring and record keeping of the throughput rate of dry wood shall be maintained on a monthly basis to estimate emissions from this unit. The rate of wet wood processed is monitored continuously at the facility. The rate of dry wood processed is calculated from the rate of wet wood by the conversion dry wood equals 50% of wet wood, based on literature and past testing of materials used at the plant. This conversion was also used for all stack testing and calculations to determine emission factors.

401 KAR 63:010, Fugitive Emissions and 401 KAR 51:017, Prevention of significant deterioration of air quality (BACT for PM/PM₁₀) applies to the operating and emission limitations. Per 401 KAR 63:010, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the use of water sprays or other measures to suppress the dust emissions during handling. Best available control technology (BACT) for particulate matter (PM) and for particulate matter less than 10 microns (PM₁₀) shall be applied by the source to minimize fugitive dust emissions. The permittee shall limit the throughput of the amount of dry wood received such that the maximum annual total (12-month rolling average) does not exceed 337,260 tons per year.

Compliance with operating and emission limitations to suppress and minimize fugitive dust emissions will be demonstrated by dust suppression during wood truck unloading, and good operating practices during material handling.

E. Unit 02 Wet Wood Dryer and Dry Wood Charring Furnace (Retort Furnace) – both

controlled by After Combustion Chamber (ACC) with ACC stack

The wet wood dryer will be replaced with a new rotary dryer. The existing retort furnace, constructed in 1969, will have an increased capacity. The proposed maximum operating limit is 77 tons of wet wood/hour to the dryer and 38.5 tons of dry wood/hour to the furnace. Emissions from the wood dryer and the retort furnace go through cyclone separators. The gases from the cyclone exhausts are combined in the ACC.

The following regulations are applicable to the unit:

- | | |
|----------------|--|
| 401 KAR 59:010 | New process operations applicable to emission units commenced on or after July 2, 1975. |
| 401 KAR 51:017 | Prevention of significant deterioration of air quality - BACT for nitrogen oxides (NO _x), sulfur dioxide (SO ₂), PM, PM ₁₀ and volatile organic compounds (VOC) |
| 40 CFR 64 | Compliance Assurance Monitoring (for PM) |

BACT analysis for VOC emissions was previously performed and accepted for the 1998 air quality PSD permit to construct and operate a Solvent Treated Briquet (STB) production line. There will be no additional potential to emit VOC from the STB production line from the proposed modifications. The proposed modifications will have a significant net emissions increase of NO_x, SO₂, PM, and PM₁₀; and BACT analysis was performed for these pollutants. Proposed BACT includes the following:

- | | |
|---------------------|--|
| PM/PM ₁₀ | Use of the existing high-efficiency cyclone collectors and the ACC afterburner |
| SO ₂ | Use of 0.1% or less weight sulfur in fuel oil in the ACC auxiliary burner |
| NO _x | Use of low-NO _x burners and staged combustion in the ACC |

The ACC afterburner control for PM/PM₁₀ is the only BACT that is considered a control device per 40 CFR 64 definitions and applicability for Compliance Assurance Monitoring (CAM).

Pursuant to 401 KAR 51:017, under normal operating conditions with no more than 80% of the emissions going out the ACC stack, emissions into the open air from the ACC stack shall not exceed the following limits:

- 1) 60.60 lbs/hr of PM
- 2) 48.48 lbs/hr of PM₁₀
- 3) 92.71 lbs/hr of NO_x
- 4) 24.24 lbs/hr of SO₂
- 5) 7.13 lbs/hr of VOC

The BACT analysis for PM/PM₁₀ evaluated the operation, control effectiveness, and technical limitations of using fabric filters, electrostatic precipitators (ESPs), wet scrubbers, cyclones, and thermal oxidation. Fabric filters, ESPs, and wet cyclones were determined to be technically and economically infeasible. The BACT analysis for NO_x evaluated the operation, control effectiveness, and technical limitations of using selective catalytic reduction (SCR), selective non-catalytic reduction

(SNCR), and combustion technologies. Kingsford stated that SCR and SNCR were determined to be technically and economically infeasible. The use of extremely low sulfur content fuel (0.1% weight sulfur content) is the best control for SO₂, and the use of an after combustion chamber for thermal oxidation is the best control for VOC.

With 100% of the emissions from the retort furnace and wood rotary dryer going out the ACC stack, the proposed BACT emission limits for PM are higher than the process weight regulation limits (401 KAR 59:010). Therefore, the unit can only be operated with a maximum of 80% of emissions going out the ACC stack and a minimum of 20% of emissions to the briquet dryers and waste heat boiler (EU-07, EU-08, EU-09, and EU-10). Kingsford has proposed that the 20%, or greater, of emissions going to the dryers and boiler are not to be included for determining emissions from the retort furnace and the wood rotary dryer. No emissions from the retort furnace and wood rotary dryer are emitted from the waste heat boiler, although heat is transferred. PM emissions from the dryers may be less than the PM total in the gas stream fed to the dryers (Kingsford has noticed a white dust on the briquets coming out of the dryers). The 20% or greater of emissions in the gas stream going to the dryers has been viewed as part of a new process with a process weight regulation limit for each dryer.

Under circumstances when 20% of the total flow of emissions cannot be diverted to the briquet dryers (greater than 80% of total flow out the ACC stack), the maximum throughput of wet wood to the dryer shall not exceed 62.6 tons/hr, and the maximum throughput of dry wood to the retort furnace rate shall not exceed 31.3 tons/hr to comply with KAR 59:010.

Pursuant to 401 KAR 59:010, under operating conditions with greater than 80% of the emissions going out the ACC stack, the process rate shall be limited so that the particulate matter emissions into the open air shall not exceed:

$$\text{Combined Allowable Rate of Emission in lb of PM/hr} = 17.31(P_1)^{0.16} + 17.31(P_2)^{0.16}$$
$$\text{Maximum} = 63.02 \text{ lb PM/hr}$$

where the max $P_1 = 62.6 - (0.1)(62.6) = 56.34$, assuming 10% uncombined moisture in wet wood and the max $P_2 = 31.3$, from the combined emissions in the ACC unit.

Under normal operating conditions, the two cyclones for the wood dryer, the four cyclones for the retort furnace, and the ACC for the combined gas stream shall be operating, and the ACC combustion chamber operating temperature shall remain above 1400°F on a 3-hour average. Immediate corrective actions shall be taken whenever the 3-hour average operating temperature of the ACC combustion chamber falls below 1400°F or the temperature reading of the two thermocouples in the ACC combustion chamber is not within plus/minus 100°F of each other.

Stack testing was performed in March 1995 using EPA Reference test methods to determine emission rates of all criteria pollutants from the ACC stack. Maximum emission from the ACC stack was 69 lbs PM/hr at 100% flow through the stack. Although an emission factor of 2.16 lbs PM/ton of dry wood was determined, based on the 1995 stack test, an emission factor of 1.97 lbs of PM/ton of dry wood shall be used based on the BACT analysis, until site testing is performed. EPA Reference Method 5 or equivalent shall be performed to determine the combined amount of PM emissions per ton of dry wood processed through the wet wood dryer and the retort furnace. The test shall be performed during normal operations (a maximum of 80% of emissions going out the ACC stack).

EPA Reference Method 2A or equivalent shall be performed to determine the flowrate of ACC gases. One test shall be performed under conditions with 100% of emissions going out the ACC stack. One test shall be performed under normal operating conditions. The percent of ACC gases that are ducted to the dryers under normal operations shall be calculated and reported with the test results.

For emission reporting and fee purposes, the emission factors derived from the BACT analysis shall be used, until the new stack test is performed.

Pursuant to 40 CFR 64, the permittee has specified the parameter, frequency, and quality control of the monitoring equipment. The temperature shall be monitored from a thermocouple in the ACC every second. A second thermocouple will be checked weekly for difference from the first thermocouple and corrective actions taken when the temperature difference is greater than 100 degrees. In addition the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated of control equipment for all necessary repairs. The permittee shall also monitor the wood processing rate and hours of operation on a daily basis.

E. Unit 03 Briquet Cooler B

The maximum throughput and the maximum potential emissions from this unit will not change from the existing Title V permit. The maximum production rate for Cooler B is 7 tons of briquets/hr. The unit is subject to a production PM emission limitation, 401 KAR 61:020:

$$E = 4.10(7)^{0.67} = 15.10 \text{ lbs PM/hr}$$

Stack testing was performed in March 1995 using EPA Reference test methods to determine emission rates of PM and PM₁₀ from the two stacks of the unit. Maximum emissions from the unit were 3.35 lbs PM/hr and 0.96 lbs PM₁₀/hr.

For compliance with the PM emission limit, an emission factor of 0.48 lbs PM/ton of briquets shall be used, based on the 1995 stack test, until new information is gathered from the unit stack.

For emission reporting and fee purposes, the following emission factor shall be used from the 1995 stack test data, until the new stack tests are performed for this unit: 0.14 lb PM₁₀/ton briquets.

E. Unit 04 Briquet Cooler C

The maximum throughput and the maximum potential emissions from this unit will not change from the existing Title V permit. The maximum production rate for Cooler C is 8 tons of briquets/hr. The unit is subject to a production PM emission limitation, 401 KAR 59:010:

$$E = 3.59(8)^{0.62} = 13.03 \text{ lbs PM/hr}$$

Stack testing was performed in March 1995 using EPA Reference test methods to determine emission

rates of PM and PM₁₀ from the two stacks of the unit. Maximum emissions from the unit were 3.97 lbs PM/hr and 1.94 lbs PM₁₀/hr.

For compliance with the PM emission limit, an emission factor of 0.50 lbs PM/ton of briquets shall be used, based on the 1995 stack test, until new information is gathered from the unit stack tests.

For emission reporting and fee purposes, the following emission factor shall be used from the 1995 stack test data, until the new stack tests are performed for this unit: 0.24 lb PM₁₀/ton briquets.

E. Unit 05 Briquet Manufacturing Dust Collection (pre-packaging) and
E. Unit 06 Briquet Packaging and Bagging Dust Collection

A separate baghouse is the control device for the briquet manufacturing area and the briquet packaging and bagging area, each with a 98% rated efficiency. Emission factors were calculated based on the maximum rated volumetric flowrate for each collector and the maximum outlet PM concentrations (gr/scf) from vendor control device estimates.

The proposed maximum throughput and the maximum potential emissions from emission unit EU-05 will increase with the proposed modifications. There will be no change in operation or physical modification made to emission unit EU-05 or EU-06. The manufacturing dust collectors will be limited by a briquet manufacturing limit of 27 tons of briquets/hr, based on the maximum throughput of the briquet dryers. This unit is subject to a production PM emission limitation, 401 KAR 59:010:

$$E_{\text{briquet manufacturing dust collector}} = 3.59(27)^{0.62} = 27.70 \text{ lbs PM/hr}$$

For calculating emissions, an emission factor of 0.20 lbs PM/ton and PM₁₀/ton of briquets shall be used.

The briquet packaging and handling dust collectors will be limited by a briquet packaging limit of 30 tons of briquets/hr, based on the maximum throughput of packaging equipment. This unit is also subject to a production PM emission limitation, 401 KAR 59:010:

$$E_{\text{briquet packaging and handling dust collector}} = 3.59(30)^{0.62} = 29.57 \text{ lbs PM/hr}$$

For calculating emissions, an emission factor of 0.18 lbs PM/ton and PM₁₀/ton of briquets shall be used.

For compliance with the PM emission limits, the filters shall be operated and used as necessary to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.

E. Unit 07 Briquet Dryer A

The existing Briquet Dryer A will be replaced with a higher rated dryer with a new Briquet Cooler (emission unit EU-38). The existing dryer has been permitted under the June 9, 1998 Prevention of Significant Deterioration (PSD) air permit, subject to 401 KAR 51:017, for emission of VOC. The new unit will be subject to PSD for emission of PM/PM₁₀. The maximum rate for charcoal briquets through the dryer is 12 packaged tons/hr. The allowable emission for PM is 6 lbs/hr of PM and 3.6 lbs/hr of PM₁₀, based on the BACT analysis.

For compliance with the PM/PM₁₀ emission limits, an emission factor of 0.5 lbs of PM/ton of dry briquets and 0.30 lbs PM₁₀/ton of dry briquets shall be used based on the BACT analysis, until new stack tests are performed of this unit. For emission reporting and fee purposes, the following emission factors shall be used from the 1995 stack test data of the ACC: 0.40 lb NO_x/ton briquets; 0.056 lb CO/ton briquets; 0.78 lb SO₂/ton briquets; and 0.060 lb VOC/ton briquet, until the new stack test of the unit.

For emission limits and compliance with PSD, please refer to Sect. D, Facility STB fines fugitive emissions.

E. Unit 08 Briquet Dryer B

The maximum throughput and the maximum potential emissions from this unit will not change from the existing Title V permit. Briquet Dryer B is a pre 7/2/75 unit, subject to 401 KAR 61:020. The dryer has also been permitted under the June 9, 1998 PSD air permit, subject to 401 KAR 51:017. The maximum rate for charcoal briquets through the dryer is 7 packaged tons/hr. The allowable emissions for PM is

$$E_{\text{dryer B}} = 4.10(7)^{0.67} = 15.10 \text{ lbs PM/hr}$$

Stack testing was performed in March 1995 using EPA Reference test methods to determine emission rates of PM from both stacks of the unit. For compliance with the PM emission limit, an emission factor of 0.64 lbs PM/ton of briquets shall be used, based on the 1995 stack test, until new information is gathered from the unit stack tests.

For emission reporting and fee purposes, the following emission factors shall be used from the 1995 stack test data for PM from this unit and all criteria pollutants from the 1995 ACC stack test, until the new stack tests are performed: 0.30 lb PM₁₀/ton briquets; 0.49 lb NO_x/ton briquets; 0.069 lb CO/ton briquets; 0.97 lb SO₂/ton briquets; and 0.074 lb VOC/ton briquet.

For emission limits and compliance with PSD, please refer to Sect. D, Facility STB fines fugitive emissions.

E. Unit 09 Briquet Dryer C

The maximum throughput and the maximum potential emissions from this unit will not change from the existing Title V permit. Briquet Dryer C is a post 7/2/75 unit, subject to 401 KAR 59:010. The dryer has also been permitted under the June 9, 1998 PSD air permit, subject to 401 KAR 51:017. The maximum rate for charcoal briquets through the dryer is 8 packaged tons/hr. The allowable emissions for PM is

$$E_{\text{dryer C}} = 3.59(8)^{0.62} = 13.03 \text{ lbs PM/hr}$$

Stack testing was performed in March 1995 using EPA Reference test methods to determine emission rates of PM from both stacks of the unit. For compliance with the PM emission limit, an emission factor of 0.40 lbs PM/ton of briquets shall be used, based on the 1995 stack test, until new information is gathered from the unit stack tests that shall be performed.

For emission reporting and fee purposes, the following emission factors shall be used from the 1995 stack test data for PM from this unit and all criteria pollutants from the 1995 ACC stack test, until the new stack tests are performed: 0.21 lb PM₁₀/ton briquets; 0.45 lb NO_x/ton briquets; 0.063 lb CO/ton briquets; 0.89 lb SO₂/ton briquets; and 0.068 lb VOC/ton briquet.

For emission limits and compliance with PSD, please refer to Sect. D, Facility STB fines fugitive emissions.

E. Unit 10 #2 oil fired indirect heat exchanger rated at 12.6 mmBtu/hr (Waste Heat Boiler)

The waste heat boiler produces steam for various process operations. The waste heat boiler influent is from a percentage of the ACC exhaust gases. The exhaust from the waste heat boiler goes through the waste heat boiler stack. The waste heat boiler operates in one of two modes:

1. Waste heat from the ACC stack exhaust with no oil firing in the waste heat boiler; or
2. Waste heat from the ACC stack exhaust with firing distillate fuel oil (0.5% sulfur in oil) in a single 12.6 mmBtu/hr burner in the waste heat boiler.

The applicable regulations and emission limitations are dependent on the method of operation.

1. Waste heat from percentage of the ACC stack exhaust (no oil firing)

Testing was performed in 1995 to determine the measured flowrate of gases through the ACC and the waste heat boiler stack. Based on this testing, a maximum of 5.5 percent of the ACC flow goes to the waste heat boiler. Based on this maximum flowrate and the ACC stack testing for all criteria pollutants, the following emission factors shall be used for emission reporting and fee purposes, until a new ACC stack test is performed: 0.12 lb PM/ton dry wood; 0.095 lb PM₁₀/ton dry wood; 0.094 lb NO_x/ton dry wood; 0.0048 lb CO/ton dry wood; 0.0045 lb SO₂/ton dry wood; and 0.014 lb VOC/ton dry wood. The maximum rate for dry wood is 38.5 tons/hr.

2. Waste heat from percentage of the ACC stack exhaust (distillate oil firing, 0.5 %S)

40 CFR 60, subpart Dc, limits the percent of sulfur in the fuel to 0.5 weight percent sulfur. Compliance with this limitation will be obtained from the use of low sulfur fuel, as certified by the vendor, and monitoring and recordkeeping of the fuel used in the heat exchanger.

401 KAR 59:015 applies to new indirect heat exchangers:

$$E = 0.9634(12.6)^{-0.2356} = 0.53 \text{ lbs PM/mmBtu}$$
$$E = 7.7223(12.6)^{-0.4106} = 2.73 \text{ lbs SO}_2\text{/mmBtu}$$

For compliance with the PM and SO₂ emission limit, an emission factor of 0.014 lbs PM/mmBtu and (1.07)(% Sulfur) lbs SO₂/mmBtu shall be used, based on AP-42 emission factors, and the heat capacity of the heat exchanger.

The following emission factors shall be used to determine the emissions from fuel

consumption in the unit, based on AP-42 emission factors: 0.007 lb PM₁₀/mmBtu; 0.143 lb NO_x/mmBtu; 0.036 lb CO/mmBtu; and 0.002 lb VOC/mmBtu. Note that these emission factors do not include the emissions already going through the waste heat boiler from the ACC exhaust.

E. Unit 11 Plant roads

401 KAR 63:010 for fugitive emissions will apply to plant roads. No person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. No person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate.

For emission reporting and fee purposes, refer to the attached spreadsheet on paved roads and unpaved roads. The emission factors are based on AP-42 emission factors for paved and unpaved roads. Road silt loading and silt content of unpaved roads was calculated from site testing. Site data was also used to estimate the vehicle miles traveled on each road with an estimated 30 tons in each truck. There was an average of 120 days per year greater than 0.01 inches of rainfall. The speed limit for all facility roads is 10 miles per hour.

For compliance, the facility shall maintain records of the calculations to determine the fugitive emissions from paved and unpaved roads with all data used in the calculations. Records shall be maintained for the current year and the two previous years. Compliance with the fugitive emission limitation may include the washing of paved roadways and washing of vehicles and vehicular tires before exiting the facility, if necessary. The facility has posted a 10 miles per hour sign on facility property.

E. Unit 37 Solvent Treated Briquet (STB) production line

The STB production line has been permitted under the June 9, 1998 PSD air permit, and is subject to 401 KAR 51:017. Pursuant to this regulation, there are numerous operating and emission limitations to control and minimize VOC emissions. All limitations and requirements from the 1998 PSD permit will be rolled over into this Title V permit. No significant changes have been made to the STB production line since the 1998 PSD permit.

The facility shall use an emission factor of 64.7988 pounds of VOC per 1,000 gallons of lighter fluid with a 95% efficiency of the ACC unit for removal of VOC emissions, until new information is gathered from the ACC stack test that shall be performed within 6 months from issue of this permit. The stack test shall determine the VOC emissions from the ACC unit due to the solvent treated briquet line operation. Compliance will be obtained from the following monitoring and record keeping: the usage rate of lighter fluid in any consecutive twelve month period; the STB production rate in any consecutive twelve month period; and the average lighter fluid usage on a weekly basis to insure permit limitations are not exceeded.

E. Unit 38 Briquet Cooler A

A new briquet cooler is proposed to be installed when the existing Briquet Dryer A is replaced with the higher rated dryer. The unit will be subject to PSD for emission of PM/PM₁₀. The maximum rate for charcoal briquets through the cooler is 12 tons/hr. The allowable emission for PM is 6 lbs/hr of PM and 3.6 lbs/hr of PM₁₀, based on the BACT analysis.

For compliance with the PM emission limit, an emission factor of 0.5 lbs of PM/ton of dry briquets and 0.30 lbs PM₁₀/ton of dry briquets shall be used based on the BACT analysis, until new stack tests are performed on this unit.

Sect. D Facility STB fines fugitive emissions

The STB production line and dryers A, B, and C have been permitted under the June 9, 1998 PSD air permit, and were subject to 401 KAR 51:017. Fines from the STB production process contain VOCs, and the fines are recycled through one of the three dryers. Pursuant to this regulation, VOC emissions from the three dryers (E.U.'s 07, 08, and 09) shall not exceed 51.9 lbs/hour averaged on a daily basis and 169.3 tons in any consecutive twelve months period.

For emission reporting and fee purposes, the overall STB fines VOC emission factor is 2.23 pounds of VOC per ton of STB produced (including both the rerun fines and the tank recycle fines). The VOC emission factors provided by Kingsford are stated to be the most accurate emission estimates available (referenced from the May 2, 2003 Kingsford letter).

Compliance is demonstrated with the solvent usage rate limitation on E.U. 37. All limitations and requirements from the 1998 PSD permit were rolled over into the Title V permit. No significant changes have been made to the STB production line since the 1998 PSD permit.

Insignificant Activities

One new carbonaceous material storage silo has been added to the list of insignificant activities. There will be modifications to the briquet infeed system, briquet cooler discharge and transfer system modifications, and modifications to the wood infeed system. These modifications could affect some or all of the insignificant activities, but all of the insignificant activities will remain as insignificant activities and meet the criteria for insignificant activities.

Regulations not applicable:

40 CFR, Part 64 – Compliance Assurance Monitoring, does not apply for the monitoring of NO_x emissions from the ACC, because low-NO_x burners and staged combustion are not controls, per 40 CFR, Part 64 definitions.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable

Permit Statement of Basis
Kingsford Manufacturing Company
Permit # V-03-018 R2
Page 12 of 12

requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

S:\Combust\Ralph\V-03-018 R1 Kingsford Manufacturing